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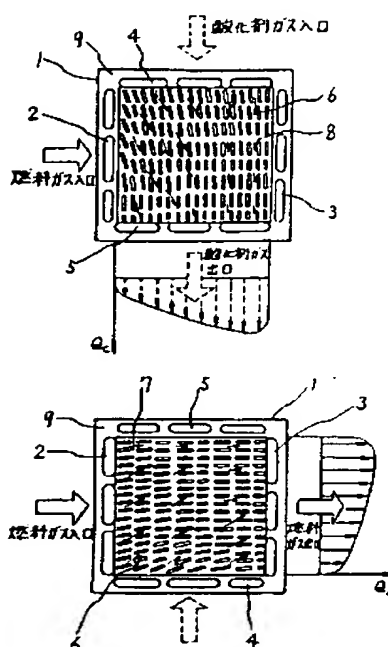
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APPLICANT : HITACHI LTD;

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TITLE : FUEL CELL



ABSTRACT : PURPOSE: To make temperature distribution and current density distribution uniform by providing a separator plate with a flow distribution control means for controlling gas flow distribution in each of fuel and oxidizer gas flow directions so as to make temp and current density distribution uniform in a unit cell.

CONSTITUTION: Oxidizer gas 8 flows into a separator plate 1 from an oxidizer gas inlet manifold 4, and flows between gas passages and ribs 6 which act as passages for generated current, while performing power generation by electrochemical reaction. Here ribs 6 are largely inclined to the flow of oxidizer gas 8 on the fuel gas inlet side, and are made parallel on the outlet side of fuel gas 7. In the meanwhile, fuel gas flowing from the fuel gas inlet manifold 2 to a passage in a separator flows between the ribs 6, and gets out from the fuel gas outlet manifold 3. Here, inclination angle between the ribs 6 and the flow direction is set large on the oxidizer gas inlet side and small on the oxidizer gas outlet side as in the case of the oxidizer gas. Thus temperature distribution and current density distribution in a cell become uniform, and its service life and performance are improved.

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